AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. *(currently amended)* A driver circuit, comprising:

a voltage booster coupled to receive an input voltage and coupled to provide an output voltage having an increased magnitude relative to the input voltage;

a current source coupled to receive the input voltage and to provide a substantially constant current in response to the input voltage, the current source comprising a bias generation circuit coupled to provide a bias voltage in response to the input voltage and a current conduction device coupled to receive the bias voltage and coupled to provide the substantially constant current in response to the bias voltage; and

a component coupled to the voltage booster and the current source, wherein the voltage booster activates the component using the output voltage and the substantially constant current.

2. *(original)* The driver circuit of Claim 1, wherein the voltage booster comprises:

a buffer coupled to provide a charging signal in response to a first polarity of the input voltage; and

an energy storage device coupled to receive the charging signal to increase a voltage developed across the energy storage device.

3. *(original)* The driver circuit of Claim 2, wherein the buffer is further coupled to provide a driving signal in response to a second polarity of the input voltage, the driving signal being combined with the voltage developed across the energy storage device to produce the output voltage.

4. *(canceled)*

5. *(original)* The driver circuit of Claim 4, wherein the bias generation circuit comprises a series combination of diodes.

6. *(original)* The driver circuit of Claim 5, wherein the current conduction device comprises a transistor having a voltage across a control terminal and a conduction terminal of the transistor substantially equal to a voltage across one of the diodes.

7. *(original)* The driver circuit of Claim 6 further comprising a current limiting device, wherein the current limiting device limits the substantially constant current to be proportional to the voltage across one of the diodes.

8. *(original)* The driver circuit of Claim 1, wherein the component includes a light emitting diode (LED) having an illumination state controlled by the voltage booster.

9. *(original)* The driver circuit of Claim 8, wherein a forward current conducted by the LED is substantially equal to the substantially constant current.

10. *(original)* A method of controlling backlighting associated with a display, comprising:

storing charge from a power source in a first phase of operation when a bias voltage supplying at least one Light Emitting Diode (LED) is less than a forward voltage required by the LED, wherein the power source provides a voltage level lower than the forward voltage required by the LED;

in a second phase of operation, combining an operating voltage with the stored charge to illuminate the LED using the combined voltage as the bias voltage; and

alternating the first and second phases of operation to control the backlighting associated with the display.

11. *(original)* The method of Claim 10, wherein storing charge comprises providing a charging signal from the power source to an energy storage device by conducting the charging signal using a driver.

12. *(original)* The method of Claim 11, where the driver conducts the charging signal in response to a first polarity of an illumination signal.

13. *(original)* The method of Claim 12, wherein the operating voltage is provided by the driver operating in response to a second polarity of the illumination signal.

14. *(original)* The method of Claim 10, wherein the LED is non-luminescent in the first phase of operation.

15. *(original)* The method of Claim 14, wherein the LED is luminescent in the second phase of operation.

16. *(original)* The method of Claim 15, wherein a perceived intensity of the LED is proportional to a duty cycle formed by the second phase and the first phase.

17. *(original)* An environmental control system, comprising:

a display controller coupled to the environmental control system to provide display information;

a thermostat comprising an LCD coupled to receive the display information, and an LCD backlight system coupled to the LCD, the LCD backlight system comprising:

a voltage booster coupled to receive a lighting control signal and coupled to provide an output signal having an increased magnitude of the lighting control signal;

a current source coupled to receive the lighting control signal and coupled to provide a substantially constant current in response to the lighting control signal; and

a Light Emitting Diode (LED) coupled to the voltage booster and the current source, wherein the voltage booster activates the LED using the output signal and the substantially constant current.

18. *(original)* The environmental control system of Claim 17, wherein the voltage booster comprises:

a buffer coupled to provide a charging signal in response to a first polarity of the lighting control signal; and

an energy storage device coupled to receive the charging signal to increase a voltage developed across the energy storage device.

19. *(original)* The environmental control system of Claim 18, wherein the buffer is further coupled to provide a driving signal in response to a second polarity of the lighting control signal, the driving signal being combined with the voltage developed across the energy storage device to produce the output signal.

20. *(original)* The environmental control system of Claim 17, wherein the current source comprises:

a bias generation circuit coupled to provide a bias voltage in response to the lighting control signal; and

a current conduction device coupled to receive the bias voltage and coupled to provide the substantially constant current in response to the bias voltage.

21. *(original)* The environmental control system of Claim 20, wherein the bias generation circuit comprises a series combination of diodes.

22. *(original)* The environmental control system of Claim 21, wherein the current conduction device comprises a transistor, wherein a voltage across a control terminal and a conduction terminal of the transistor is substantially equal to a voltage across one of the diodes.

23. *(original)* The environmental control system of Claim 22 further comprising a current limiting device, wherein the current limiting device limits the substantially constant current to be proportional to the voltage across one of the diodes.

24. *(original)* The environmental control system of Claim 17, wherein a forward current conducted by the LED is substantially equal to the substantially constant current.

25. *(currently amended)* A method of controlling a luminescent state of a Light Emitting Diode (LED), comprising:

receiving an input signal;

boosting the input signal to form a boosted signal, comprising:

generating a charging signal in response to a first phase of the input signal;

increasing a potential stored across an energy storage device in response to the charging signal; and

combining the input signal with the potential stored across the energy storage device in response to a second phase of the input signal;

generating a substantially constant current from the input signal, comprising:

forming a bias signal in response to the second phase of the input signal; and

inducing a conductive state of a current control device in response to the bias signal, wherein the substantially constant current is proportional to the bias signal; and

applying the boosted signal and the substantially constant current to illuminate the LED.

26. *(canceled)*

27. *(canceled)*

28. *(canceled)*

29. *(currently amended)* A Light Emitting Diode (LED) control circuit, comprising:

~~means for charging an energy storage device during a first phase of operation of the LED control circuit; and~~

~~means for discharging the energy storage device during a second phase of operation of the LED control circuit to illuminate an LED, wherein means for discharging the energy storage device comprises:~~

~~means for summing the charge stored in the energy storage device with an illumination signal; and~~

~~means for supplying a constant current during the second phase of operation~~

means for storing charge from a power source in a first phase of operation when a bias voltage supplying at least one Light Emitting Diode (LED) is less than a forward voltage required by the LED, wherein the power source provides a voltage level lower than the forward voltage required by the LED;

means for combining, in a second phase of operation, an operating voltage with the stored charge to illuminate the LED using the combined voltage as the bias voltage; and

means for alternating the first and second phases of operation to control the backlighting associated with the display.

30. *(canceled)*